Psoriasis PTG

Fred F. Ferri M.D.

BASIC INFORMATION

DEFINITION

Psoriasis is a chronic skin disorder characterized by excessive proliferation of keratinocytes, resulting in the formation of thickened scaly plaques, itching, and inflammatory changes of the epidermis and dermis. The various forms of **psoriasis** include guttate, pustular, and arthritis variants.

ICD-9CM CODES

696.0 **Psoriasis**, arthritis, arthropathic

696.1 **Psoriasis**, any type except arthropathic

EPIDEMIOLOGY & DEMOGRAPHICS

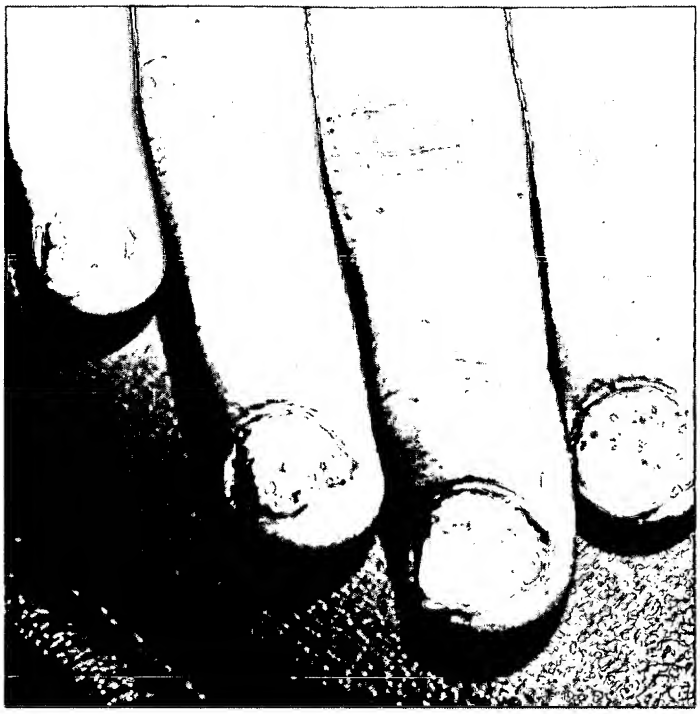
- **Psoriasis** affects 1% to 3% of the world's population. Most patients have limited **psoriasis** involving <5% of their body surface.
- There is a strong association between **psoriasis** and HLA B13, B17, and B27 (pustular **psoriasis**).
- Peak age of onset is bimodal (adolescents and at 60 yr of age).
- Men and women are equally affected.

PHYSICAL FINDINGS & CLINICAL PRESENTATION

- The primary psoriatic lesion is an erythematous papule topped by a loosely adherent scale. Scraping the scale results in several bleeding points (Auspitz sign).
- Chronic plaque **psoriasis** generally manifests with symmetric, sharply demarcated, erythromatous, silver-scaled patches affecting primarily the intergluteal folds, elbows, scalp, fingernails, toenails, and knees (Fig. 1–224 , *A*). This form accounts for 80% of **psoriasis** cases.
- **Psoriasis** can also develop at the site of any physical trauma (sunburn, scratching). This is known as Koebner's phenomenon.
- Nail involvement is common (pitting of the nail plate), resulting in hyperkeratosis, onychodystrophy with onycholysis (Fig. 1–224 , *B*).

- Pruritus is variable.
- Joint involvement can result in sacroiliitis and spondylitis.
- Guttate **psoriasis** is generally preceded by streptococcal pharyngitis and manifests with multiple droplike lesions on the extremities and the trunk (Fig. 1–224 , *C*).

A



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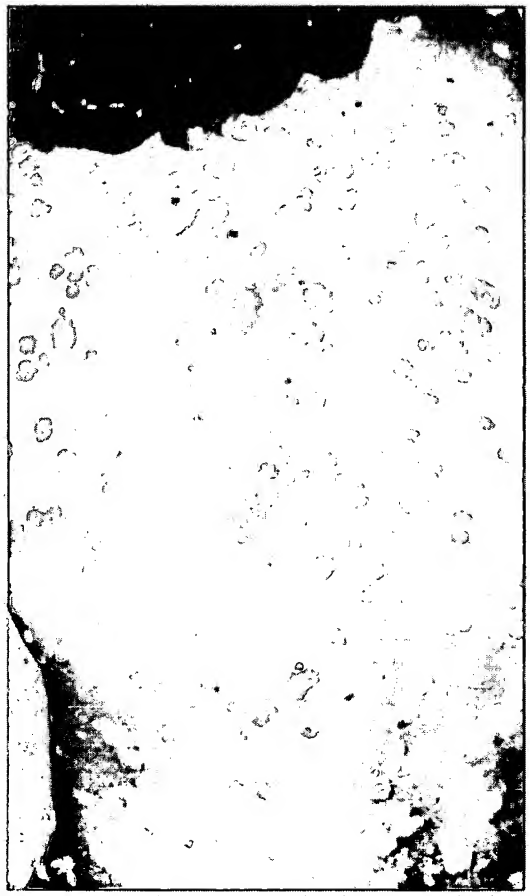

C

Figure 1-224 A, Chronic psoriatic plaques on the knee. **B,** Psoriatic nail changes of pitting and dystrophy. **C,** Guttate **psoriasis** in widespread distribution over the trunk. *(From Behrman RE: Nelson textbook of pediatrics, ed 16, Philadelphia, 2000, WB Saunders.)*

ETIOLOGY

- Unknown
- Familial clustering (genetic transmission with a dominant mode with variable penetrants)
- One third of persons affected have a positive family history

DIAGNOSIS

DIFFERENTIAL DIAGNOSIS

- Contact dermatitis
- Atopic dermatitis
- Stasis dermatitis
- Tinea
- Nummular dermatitis
- Candidiasis
- Mycosis fungoides
- Cutaneous SLE
- Secondary and tertiary syphilis
- Drug eruption

WORKUP

- Diagnosis is clinical.
- Skin biopsy is rarely necessary.

LABORATORY TESTS

Generally not necessary for diagnosis

TREATMENT

NONPHARMACOLOGIC THERAPY

- Sunbathing generally leads to improvement.
- Eliminate triggering factors (e.g., stress, certain medications [e.g., lithium, β-blockers, antimalarials]).
- Patients with **psoriasis** benefit from a daily bath in warm water followed by application of a cream or ointment moisturizer. Regular use or an emollient moisturizer limits evaporation of water from the skin and allows the stratum corneum to rehydrate itself.

GENERAL Rx

Therapeutic options vary according to the extent of disease.

- Patients with limited disease (<20% of the body) can be treated with the following:
  1. Topical steroids: disadvantages are brief remissions, expense, and decreased effect with continued use. Salicylic acid can be compounded by pharmacist in concentrations of 2% to 10% and used in combination with a corticosteroid to decrease amount of scale.
  2. Calcipotriene (Dovonex): a vitamin D analogue, is effective for moderate plaque **psoriasis**; adults should comb the hair, apply solution to the lesions, and rub it in, avoiding uninvolved skin; disadvantages are its cost and potential burning and skin irritation. It should not be used concurrently with salicylic acid because calcipotriene is inactivated by the acidic nature of salicylic acid.
  3. Tar products (Estar, LCD, psoriGel) can be used overnight and are most effective when combined with UVB light (Goeckerman regimen).
  4. Anthralin (Drithocreme): useful for chronic plaques, can result in purple/brown staining; best used with UVB light.
  5. Retinoids such as tazarotene 0.05%, 0.1% cream or gel, are effective in thinning plaques but are expensive and can produce irritation.
  6. Other useful measures include tape or occlusive dressing, UVB and lubricating agents, interlesional steroids.

- Therapeutic options for persons with generalized disease (affecting >20% of the body):
  1. UVB light exposure three times a week
  2. Oral PUVA (psoralen plus ultraviolet A) administered two to three times weekly is effective for generalized disease. However, many treatments are required, necessitating frequent office visits, and it may be associated with phototoxicity, such as erythema and blistering, and increased risk of skin cancer
- Systemic treatments include methotrexate 25 mg every week for severe **psoriasis**. Etretinate (Tegison) (a synthetic retinoid) is most effective for palmar-plantar pustular **psoriasis**. Dose is 0.5 to 1 mg/kg/day. It can cause liver enzyme and lipid abnormalities and is teratogenic.
- Cyclosporine is also effective in severe **psoriasis**; however, relapses are common.
- Chronic plaque **psoriasis** may be treated with alefacept, a recombinant protein that selectively targets T lymphocytes. Treatment with alefacept for 12 wk (0.025, 0.075, or 0.150 mg/kg of body weight IV weekly) may result in significant improvement. Some patients also experience a sustained clinical response after the cessation of treatment. This medication is very expensive (a 12-wk course costs >$8,000). Treatment with etanercept, a tumor necrosis factor (TNF) antagonist, for 24 wk can also lead to a reduction in severity of plaque **psoriasis**. Efalizumab, a humanized monoclonal antibody that inhibits the activation of T cells, has also been reported to produce significant improvement in plaque **psoriasis** over a 24-wk treatment period.

DISPOSITION

The course of **psoriasis** is chronic, and the disease may be refractory to treatment.

REFERRAL

- Dermatology referral is recommended in all patients with generalized disease.
- Hospital admission may be necessary for severe diffuse or poorly responsive **psoriasis**. The Goeckerman regimen combines daily application of tar with UVB exposure and can result in prolonged remissions.

PEARLS & CONSIDERATIONS

COMMENTS

Psoriasis is more emotionally than physically disabling for most patients. Counseling may be indicated, particularly when it affects younger patients.

REFERENCES

Gordon KB et al: Efalizumab for patients with moderate to severe plaque **psoriasis**, *JAMA* 290:3073, 2003.

Leonardi CL et al: Etanercept as monotherapy in patients with **psoriasis**, *N Engl J Med* 349: 2014, 2003.

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Birthmarks Best Treated With Red Laser Light

Mikhail Gorbachev was probably not greatly troubled by the "port wine stain" on his forehead, or perhaps he had no faith in the available treatments. Nevertheless, one in three of such birthmarks can be effectively treated using a laser. As part of a project funded by the NWO's Technology Council (STW), physicists at the University of Amsterdam have been able to improve the method considerably by increasing the wavelength of the laser light by a few nanometres, making it redder and able to penetrate better.

About 1% of normal skin consists of blood vessels. "Port wine" birthmarks have far more blood vessels than normal and the diameter of these vessels is also much greater. This gives the characteristic port-wine colour. This type of skin abnormality can be treated using photo-selective thermolysis, during which the area is irradiated with laser light of a particular colour; this is absorbed well by the blood but not by the rest of the skin. The light energy absorbed is converted into heat, which causes the blood vessels to shrivel up. After a period of healing, the area treated looks more like the surrounding normal skin.

The Dutch physicists developed a model enabling them to mimic the effect of various different types of laser light. They found that laser light at the wavelength of 585 nanometres currently used could hardly reach the centre of the large blood vessels. By choosing a slightly different colour, for example 590 nanometres, the deeper blood vessels were also accessible, without damage being done to the rest of the skin tissue. It should be noted that some 20% to 30% of "port wine" birthmarks are still not amenable to laser treatment, or only to a very limited extent, and treatment is sometimes painful, lengthy and expensive.

Editor's Note: The original news release can be found here.